



ENERGY EFFICIENCY SERVICES LIMITED
A JV of PSUs under the Ministry of Power

ED. 47 | DEC, 2022

INNOVATING ENERGY

INDIA'S ENERGY SECTOR ANALYSIS
AND BLUEPRINT FOR 2023



PG.11

**Top Energy
Trends From India
& Across The Globe**



CONTENTS

DECEMBER 2022 | EDITION 47

SPECIAL MESSAGE



Nitin Bhatt

Senior Manager - PR & Sales
Energy Efficiency Services Limited

This Month onwards, we are presenting our Newsletter in a new format with dynamic prospective. Hope the engagement activities added to create a two-way interaction will be appreciated and looking forward to your valuable feedback to improvise EESL's Newsletter. For Feedback please write in to pr@eesl.co.in

EDITORIAL TEAM

Animesh Mishra
Sumit Sharma
Disha Khosla
Karan Gupta
Garima Arora
Ishita Agrawal
Jai Kumar
Minhaz Siddique
Fareen Choudhary
Sonam Satapathy
Pradeep Kaktwan

Interview

Mr. Ajay Tewari, Add. Sec, MoP, GOI
Energy Efficiency, Renewable Energy
and Demand Response for Climate
Action

04

Article 1

Mr. Vishal Kapoor, CEO, EESL
Revamping The Input Credit Model for
ESCOs is the Need of the Hour

06

Article 2

Mr. Bhawanjeet Singh, ED-IC, EESL
Energy Security is at the Forefront as
India Takes the Helm of the G20

07

Lifestyle Section

Mr. Karan Arora, Senior Manager (Tech.)
Experience of Running one of the
toughest Hill Marathon

08

Fun Corner

Energy Crossword
Complete The Crossword
(Puzzle)

10

Media Bytes

December Media Bytes
Monthly Highlights

11

Employee Corner

श्री सुमित 'मनु' शर्मा,
सलाहकार (जनसम्पर्क), ईईएसएल (EESL)
**संभव है !
कविता प्रस्तुति**

12

FOR EDITORIAL DETAILS AND ADVERTISEMENT ENQUIRIES

✉ u_kgupta@eesl.co.in

☎ 011- 45801260

ESF

EDITOR'S NOTE

Dear Reader,

The global energy landscape is undergoing a shift. Energy demand is on the rise due to population growth and urbanization. This demand must be met sustainably. Consequently, renewable energy is increasingly playing a larger role in the energy mix, as the cost of storage becomes affordable, and countries pursue decarbonisation pathways. This germinates a unique opportunity to craft new policies and regulations that can take us a step closer to our climate and net zero targets. A multitude of solutions such as solar and wind generation, electric mobility, cooling, smart meters (and grids) and battery storage are proliferating to create a new normal for the energy sector. We are keenly aware of these shifts in the energy sector and our bespoke initiatives are at the heart of India's energy transition.

This revamped edition of our newsletter, themed '**India's energy sector analysis and blueprint for 2023**' aims to provide a well-rounded perspective on India's energy ecosystem, with a focus on future trends. "**Revamping the input credit model for ESCOs is the need of the hour**" explores the nuances of the financial credit model, and how, with its strong, well-defined regulations, leaves no scope for ambiguity or willful misinterpretation. We also build a case for ESCOs to shift from an operational credit model to a financial credit model in the country. In "**Energy security is at the forefront as India takes the helm of the G20**", we deconstruct how India's G-20 Presidency can create global consensus and opportunities for nations to work together, identify challenges and opportunities, and script a common understanding of how energy security and sustainability can work together.

The newsletter also features an exclusive interview with the Additional Secretary, Ministry of Power, wherein he deliberates on the reformation of the power sector, integration of emerging technologies and the future of India's energy ecosystem.

We have also curated a **Lifestyle Section**, wherein we have invited participation from our employees in the form of write-ups and photographs. We have also featured the "Special Entry" in this section. In our **Employee Corner** section, we have aimed to tap into the creativity of our employees, with poems on the topic 'Life/Zindagi'. The section features beautiful musings and ruminations on daily life.

It is my sincere hope that this newsletter will be a worthy addition to the clean energy narrative and spark conversations on the intersection of climate change, energy security and the changing global energy ecosystem.





GOVERNMENT OF INDIA
MINISTRY OF POWER



From Darkness to Light



Enlightening India

36.86 Cr LED BULBS,
72.18 Lac LED TUBE Lights &
23.6 Lac Energy Efficient Fans
Distributed PAN India Till Date
57,000 BLDC FANS has been sold

Annual Prompted Savings

Energy Savings of **48.42 billion kWh** with
Avoided Peak Demand of **9789 MW**
39.30 million t CO₂ GHG emission reduction
Estimated Annual Monetary Savings of **₹19,333 Cr**
Consumer Electricity Bills.

UJALA scheme was also included in the seven schemes that were selected for the Gram Swaraj Abhiyan (GSA) and Extended Gram Swaraj Abhiyan (EGSA) of GoI. EESL distributed over 68 lakh LED bulbs covering over 65,000 villages across India under GSA and EGSA. The distribution of LED bulbs and awareness creation among low income households under this campaign was done through distribution counters and mobile vans in the villages.

The country needed something that consumed less electricity, was brighter and less costly. This need gave birth to the UJALA scheme. Necessary steps were taken to promote LED manufacturing. Policies were changed. This reduced the price of the bulb and once people experienced its benefits, the demand also increased. The UJALA Scheme has completed 5 years yesterday itself. It is a matter of immense satisfaction for all of us that more than 36 crore LED bulbs have been distributed throughout the country.

- Prime Minister Narendra Modi, 6th January 2020



Shri Ajay Tewari

Additional Secretary

Ministry of Power, Government of India

“RDSS will be remembered as a game-changing event in the history of India's power sector”

Energy Efficiency Services Limited (EESL), working under the administration of Ministry of Power, Government of India has a monthly newsletter titled - "Innovating Energy". The theme of this month's newsletter is 'India's energy sector analysis and blueprint for 2023'. EESL's monthly newsletter has a circulation of 10,000 which includes industry stakeholders from the energy sector. The stakeholders include Global companies, Foreign Institutional Investors, Green investor community, Policy Makers, Multilateral/bilateral bodies, Think tanks and Environment orgs & National/International philanthropies. Some of these stakeholders include Ministry of New and Renewable Energy, Govt. of India, World Bank, Niti Aayog, TERI, etc.



1

India's power demand is expected to be on the rise in the long run. How can the country tackle electricity supply challenges to address peak power demand?

India's electricity demand touched a record high of 211.856 GW on June 10 this year, an increase of 5.6% compared to the peak demand of 200.57 GW recorded on July 7, 2021. The rise in peak demand can be attributed to economic growth, intense summers, and an increasing daily average temperature in India over the past decade or so. Shifting from fossil fuels to renewable resources for energy generation is essential for meeting India's ever-increasing energy needs in an environment-friendly way. India has set itself the target of achieving at least 50% of its installed capacity from non-fossil sources by 2030. Energy storage will be an important element of this transition. Energy storage systems will convert electrical energy into other forms and serve as a source of standby power during peak time.

2

How can a strong & comprehensive IT strategy benefit India's power sector?

As countries replace outdated technologies with advanced alternatives to improve their power systems and infrastructure, there is greater need of robust IT and cybersecurity frameworks. Apart from mitigating cyber threats that could otherwise disrupt operations, a cybersecurity framework enhances performance and efficiency. IT solutions can help in improving efficiency in power distribution, monitoring, and management. The Ministry of Power of the Government of India, together with the Central Electricity Authority (CEA), have issued cybersecurity guidelines to enhance the power sector's cybersecurity readiness. These guidelines have been formulated to provide early warning and prompt response against security threats; improve vulnerability management; secure remote operations and services; and ensure protection and resilience of critical information infrastructure, among other things. They will also help in improving the overall efficiency and financial sustainability of distribution companies.





3

With an upward trend in adoption of advanced technologies, what are some key developments you can foresee in the country's power transformer market?

India's power and distribution transformers market is anticipated to expand at a CAGR of over 6.89% by 2026, owing to the growing demand for power, driven by population increase, industrialization, and urbanization. India's power transformer market is witnessing changing consumption patterns and the emergence of innovative technologies. The upward trend in technology adoption lends a positive outlook to the market for the near future. The new designs and technologies that are being adopted for manufacturing and condition-monitoring will increase the overall operational and functional efficiency of power transformers.

India is building a smart electric grid and distribution system, where the systems are digitalized and can communicate in real time with each other. These systems, like any other, should be regularly updated and upgraded to keep pace with the latest advancements and requirements. India's national power grid is already fully computerized and automated. The state DISCOMs should accelerate the adoption of digital technologies to enjoy the benefits of the ongoing digital transformation.

4

What are some ways through which grid failure can be anticipated and prevented?

Apart from following grid discipline and setting up systems to ensure that states do not overdraw power, we will have to see our changing electricity generation configuration to improve the stability of the grid. Large-scale integration of renewable energy (wind and solar) will play a major role in balancing the grid. Power Grid Corporation of India (PGCIL) is also working on a project called "Unified Real Time Dynamic State Measurement (URTDSM)" for monitoring and controlling the electricity supply across the country. The Central Transmission Utility will install Phasor Measurement Units (PMUs) at all substations and power generating stations. This PMU network will facilitate monitoring and situational awareness of grid events in real time, including aspects such as power flow, voltage, backing down, demand-supply sync, and so on. This will improve grid reliability, reduce the probability of blackouts, and minimize the impact of grid curtailment. It will also pave the way for remote communication and management of power supply.

5

How can the Revamped Distribution Sector Scheme (RDSS) resolve the challenges of power distribution network in India?

Earlier, manual reading made it difficult to identify theft, AT&C losses, and defective meters. The Revamped Distribution Sector Scheme (RDSS) will make the power sector more robust, reliable, and resilient by improving the quality, reliability, and affordability of power supply through digitalization and network improvements. The distribution sector will see large investments, privatization, and digitalization in the years to come. It will transform from an ailing sector into a very attractive private investment destination. The RDSS is paving the way for all of this to happen; it will be remembered as one of the most important, game-changing events in the history of India's power sector.



REVAMPING THE INPUT CREDIT MODEL FOR ESCOs IS THE NEED OF THE HOUR

Bharat! one of the brightest spots in the World economy today, having a huge latent electricity demand fueled by socioeconomic development, industrial and infrastructural growth, and urbanization, will continue to grow rapidly in the years ahead. IEA estimates that India's energy demand could rise by more than three percent annually — the fastest among all countries — till the year 2030. We need to meet this energy demand while keeping the associated greenhouse emissions in check in this backdrop of the climate emergency. This challenge of bridging the demand-supply gap, which has a metaphorical cap on the supply side can be met only with effective demand side management measures primarily coming through energy efficiency. Energy performance contracting implemented by energy services companies (ESCOs), is one of the solutions that will help India address this challenge.

Cognizant of the importance of energy efficiency and demand-side management for providing reliable, affordable, and sustainable energy to all, the central government has taken several notable steps, including passing The Energy Conservation Act in 2001 & its amendments; and establishing the National Mission for Enhanced Energy Efficiency in 2010 to promote energy efficiency. Today, energy efficiency has the potential to develop into a very large market. Energy Performance Contracting Models that allow Capex investment upfront with its recovery through annuities spread over several years through reduction in OPEX are an attractive proposition and appears to be a win-win to all Stakeholders. Utilising such models, Super-ESCOs such as EESL have scaled up major DSM programs such as Ujala and Street Light National program. However, further scale up of these programs is getting hampered due to several issues, most importantly on count of outstanding payments from clients, viz local bodies. Challenges in MSME sector that inherently work on wafer thin margins also increase risk perceptions of ESCOs towards energy performance contracting.

Most ESCOs in India and abroad – even the super ESCOs – have faced challenges in recovering their investments. Most agreements between customers and ESCOs are based on energy performance contracts, wherein the ESCOs install and maintain the necessary equipment and the customers pay for their services from the financial savings realized by the project. The customer need not make any upfront capital investment, and the ESCO assumes both the technical risk and the credit risk.

Apart from the challenges of availability of finances with clients such as local bodies to pay the annuities, the extant system of history-based budgeting process do not support these advance methods of contracting. Annuities are composed of both the Capex and Opex components, and the magnitude of these components change every year. Ideally, booking of Capex and Opex expenditures should be done in respective accounts, but mostly, the booking is to be done in the revenue expenditure. Budgeting process is predominantly based on the historical expenditures, and if there is a gap in any year due to non-payments or diversion of payments, the same has a cascading effect even in subsequent years.

Further, the ESCO models currently operate on an operational credit model, defaults against which do not have adequate enforceability in terms of regulations, as supposed to defaults in case of loan servicing, wherein regulatory repercussions are severe. Therefore, all entities prioritise paying off their financial creditors instead of the operational creditors, something that is always to the detriment of the latter in case of perpetual fund shortages. Year on year, such a practice adopted by clients makes the projects unsustainable.

Since financial credits provide a stronger payment security mechanisms, there is a need to reimagine ESCO models to be operated in a financial credit model. Banks, Financial Institutions and Clean Energy investment funds have to step forward along with Super ESCOs to craft newer and better ways of ushering in Energy Efficiency projects.

As far as energy efficiency goes, we have presently only touched the tip of the iceberg. A demand aggregation model, combined with cost-effective energy-efficient technologies, can create a thriving market for energy-efficient products and services with the help of the right business models and, of course, the right policies and regulations. If policymakers, ESCOs, and financial institutions work together, India will be able to rapidly scale up its energy efficiency investments and programs, thus helping India meet its all its energy needs in the decades ahead.



Vishal Kapoor
CEO
Energy Efficiency Services Limited

ENERGY SECURITY IS AT THE FOREFRONT AS INDIA TAKES THE HELM OF THE G20



Courtesy: indianexpress.com

The most recent edition of the Conference of the Parties (COP27) concluded with a firm expectation that the developed world would invest trillions towards the energy transitions of the developing nations. This is the developmental context that will define India's firm stance on energy security at G20.

Financial and technological support, at a scale that benefits India's energy aspirations, is crucial to help transition towards an energy and transport mix where renewables and electric vehicles play a stronger role. A well-defined, comprehensive transition, built via robust climate finance, is crucial for India as it seeks to continue on an incredible growth trajectory that has made it the envy of global economies.

There is a larger imperative to India's energy security as well. As our Honourable Prime Minister, Shri Narendra Modi rightly articulated at the G20 Bali Summit in Indonesia in November, India's energy security is also important for global growth. With stable energy, India can continue to create value as one of the key technology, knowledge, and innovation centre for global economies. Here again, the Prime Minister reiterated the importance of "time-bound and affordable finance and sustainable supply of technology". This will be mission-critical for India's highly ambitious goals, wherein just seven years, half of India's electricity will be generated from renewable sources.

India has demonstrated strong political will in transitioning towards an energy mix with greater representation of renewables. RE-based capacity and energy efficient solutions have been gaining greater momentum. India is among the handful of nations who are accelerating towards the attainment of its Paris Agreement goals. This is a major testament to how well India's private-public partnership can work in this realm. Indeed, the world has much to learn from India's energy transition, which has been spurred on by interventions.

Investing in India's energy transition, and its strong focus on energy security, will also support the global ambition of creating new green jobs, spurring investment, and creating India both as a creator and a market of clean energy solutions. Global capital can harness India's powerful R&D and innovation potential into a major hub of clean energy technologies, from solar and wind power to nuclear, "green" hydrogen, electric vehicles, and carbon capture.

These are opportunities that no stakeholder can achieve alone. The dialogue at G20 can create a collaborative framework through which G20 policymakers and innovators can jointly develop the new business and financing models needed for a greener world. India's G-20 Presidency will see the nation work for global consensus, and identify opportunities for nations to work together, identify challenges and opportunities, and script a common understanding of how energy security and sustainability can work together.



Bhawanjeet Singh
Executive Director (IC)
Energy Efficiency Services Limited

LIFESTYLE SECTION

My Experience of Running one of the toughest Hill Marathon

In the runners' community in India, the Satara Hill Half Marathon (SHHM) is likely to figure among the must-do events. In August 2019, I proudly ticked it off on my list. It inspired me to take running seriously and make it a part of my lifestyle. And so, after the SHHM, I participated in some of the biggest marathons in and around Delhi-NCR, including the Airtel Delhi Half Marathon, the New Delhi Marathon, the Tuffman Half Marathon, as well as events that were taking place as far away as in Mashobra and Ladakh.

The SHHM was my first ever hill half marathon and my second half marathon overall. I had completed a half marathon earlier, in April 2019, in 2:09 hours, and I was targeting a similar timing for the SHHM, although I knew that a hill marathon would be tougher than running on flat ground. I had more than three months to prepare for it, and I intended to do the best I could. Back in 2018, I had joined a running group called the Gurgaon Road Runners (GRR), and even though I was not the most regular of participants in their group runs, I now tried to follow their training schedule as far as I could, especially since the GRR group too was participating in SHHM.

I ensured that I was doing 2-3 runs a week and a Long-Slow-Distance run on Sundays. My Sunday runs were usually of 10 km or more. I included interval and tempo runs too in my weekly routine. Unfortunately, there aren't many hills in Gurgaon, but there are a couple of locations with small inclines, and I used them to practice my hill interval workout. To learn more about running techniques, I took to a book called "Chi Running: A Revolutionary Approach to Effortless, Injury-Free Running". By using the power of my core muscles, as suggested in the book, I was able to achieve a notable improvement in my running performance.

I maintained a moderate level of training till July-end, but as the event drew closer, I started getting a bit anxious, because of my lack of experience in hill running. And so, in the days that remained, I increased the frequency of hill runs and repeats to get more comfortable with running uphill and increasing my pace while going downhill. Sohna, near Gurgaon, has uphill stretches where we could practice, and we GRR members did a 21-km group run as our final long-distance run with two weeks to go for the event.

The last two weeks of training were intended for tapering (gradual decrease of training). However, I met with an accident that prevented me from working out or running for more than a week. Luckily, one of my fellow runners in GRR is a doctor, and his advice helped me recover quickly. I even managed a 10-km easy run one day and a 4-km tempo run on another. It restored my confidence that I would perform as per my expectations in the main event. I prepared several versions of a pacing plan, with a target of completing the hill marathon in 2 hours and 10 minutes.

Almost 40 runners from GRR had registered for the event, and 30 of us were on the flight from Delhi to Pune on the morning of August 24, all wearing the signature orange-coloured GRR T-shirt. We rode a bus from Pune to Satara. The day before the marathon, I kept to a diet of khichdi for lunch and dinner, to avoid any possibility of a stomach infection.



Karan Arora
Senior Manager (Tech.),
Northern Regional Cluster

The energy levels on the morning of the event, at the starting line, were electrifying. There were runners from all across the country. The Indian national anthem was played before the flag-off, and the sound of Nashik drums reverberated in the air. My strategy was to start slow and preserve my energy for the downhill stretch. As we ran, we saw the locals stepping out of their houses in large numbers to cheer us on. At many places, the event organizers had even set up stages for school kids to perform, for the benefit of the runners and onlookers.

My uphill pace proved to be slightly slower than what I had anticipated, and I adopted the strategy of running with shorter strides, maintain a good rhythm, and not stop or walk in between. I kept myself hydrated throughout the run at the hydration points, which were placed at regular intervals along the route. After covering the uphill stretch, my pace picked up, and after the U-turn at the 10.5 km mark, I took advantage of the downhill gradient to improve my pace. With 3-4 km to the finish line, I calculated that there no matter how I pushed myself, there was no way I could cross the finish line before 8 o'clock to claim the first category medal. So, I eased off the pace a bit.

The last kilometer, in my experience, is the toughest stretch of any race, but the goosebumps that one gets on crossing the finish line is always a special feeling. I finished the race in 2 hours 4 minutes and 57 seconds. I was delighted with the result; I had been targeting something closer to 2 hours and 10 minutes. I headed to the recovery area, where there were teams administering acupressure and stretching exercises and cold sponges to relieve the soreness of muscles.

I really enjoyed the overall experience. Unlike my previous half marathon, I completed this one without feeling any knee pain. My leg muscles were a bit sore, yes, but that's only to be expected. I finished third in my running group, with only a few seconds separating us. GRR later gifted me a trophy for my performance. Even the Reebok Running Squad gifted me a Reebok T-shirt. All these gestures of appreciation made my day, made me feel special.

The SHHM certainly ranks among one of the memorable events in my life. Buoyed by my experience, I recently enrolled for and completed my First full marathon in Ladakh.

The most important part of running is convenience. You no special setup except a decent pair of shoes. Hit the roads and enjoy the "runner's high" – the endorphin release – it gives.



SPECIAL ENTRY



"Can't Back Down"

Utkarsh Singh
Assistant Manager (Tech)
EESL

TO WATCH
VIDEO PLEASE
SCAN THE
QR CODE



During my College days, me and my batch-mates formed a Fusion Music Group named **"THE PREACHERS"** where we infused different genres of music in various languages to come up with one single track.

The entry I am submitting was our last song titled as **"Can't Back Down"**, which was written & performed by us. This is a motivational song with an idea to let people know that one has to strive hard for success and backing down is never an option. The content & lyrics were so well penned by us as that was the final year and many had failed in getting placed in Companies or couldn't get any interview call. Keeping in view for these scenarios which everyone must have witnessed during their College days, The Preachers came out with some infused music to cheer up & motivate the youth during the year 2014.

This song was officially recorded at Nuclear Puke Music Studios in Jaipur (Rajasthan).

Below are the credits:

English Rap: **Utkarsh Singh (Raker)**

English Vocals: **Radhika Jeswani**

As writing lyrics & Rapping is one of my hobby, submitting the recorded video (YouTube link:- <https://youtu.be/YCymjuCqq-s>) of the rap part performed by me. Hope you all will like it.

You all can listen/check out the officially recorded version on the below link:

<https://youtu.be/-rReUjQzRs>

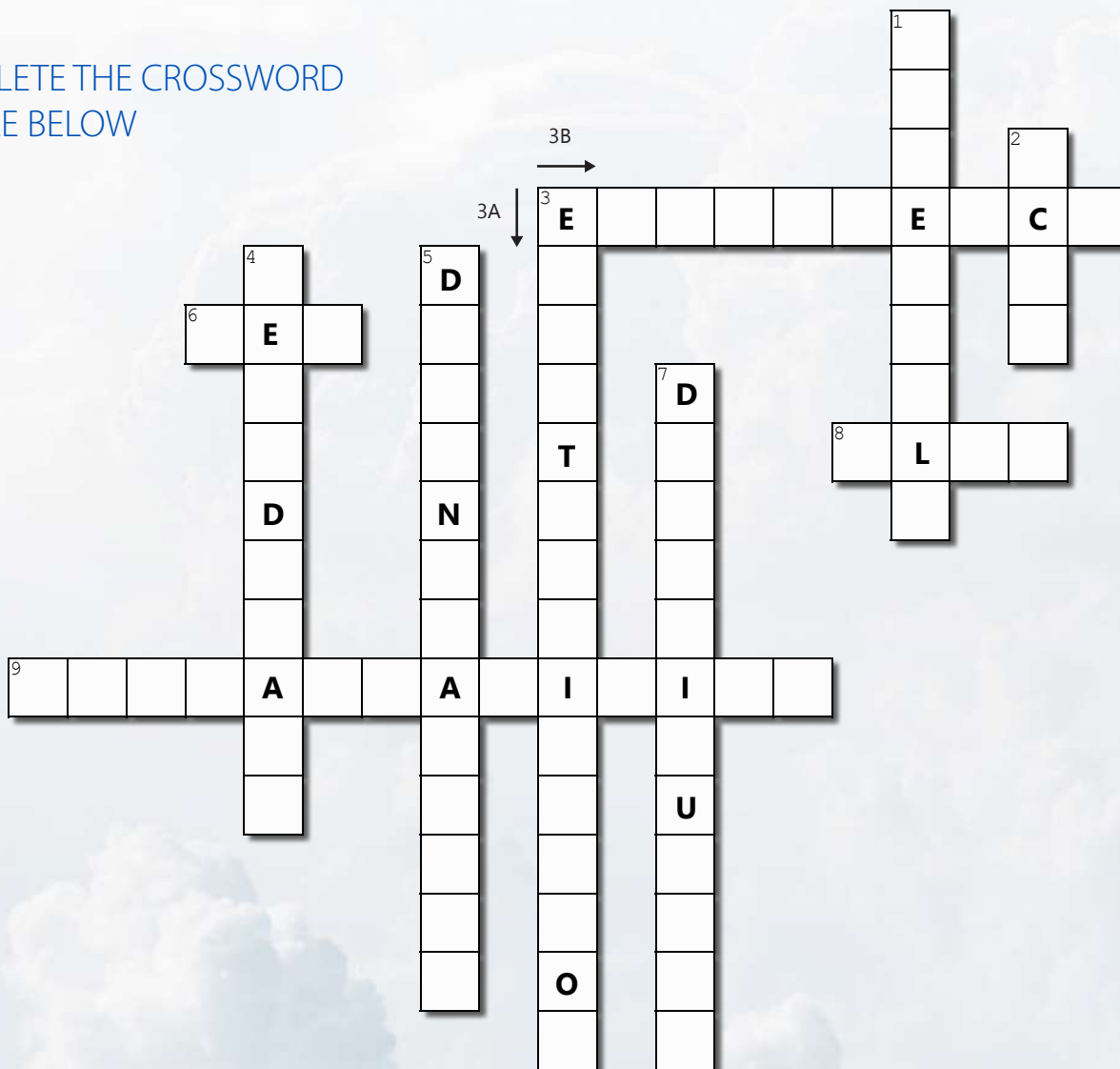
Thanks !

TO WATCH
VIDEO PLEASE
SCAN THE
QR CODE



FUN CORNER

COMPLETE THE CROSSWORD
PUZZLE BELOW



Vertical

1. Capable of being replaced by natural ecological cycles
2. A control panel with comprehensive protection, control and monitoring station for a group of street lights
- 3A. The action or process of charging something with electricity
4. The highest electrical power demand that has occurred over a specified time period
5. Energy that is generated off the main grid, including micro-renewables, heating and cooling
7. The facilities and equipment owned and operated by the utility and used to transmit electricity to ultimate usage points

Horizontal

- 3B. The ability to achieve an end goal with little to no waste, effort, or energy
6. A product that produces light up to 90% more efficiently than incandescent light bulbs
8. One type of ceiling fan which consumes lower electricity compare to normal induction fan
9. Improves the quality of our lives, protects our ecosystem and preserves natural resources for future generations

TOP ENERGY TRENDS FROM INDIA & ACROSS THE GLOBE

India's G20 presidency to play key role in clean energy push

India is among the countries that will drive the acceleration of the extraordinary increase in the deployment of renewables over the next five years. "We are entering a new and extraordinary growth phase of renewables," said International Energy Agency chief Fatih Birol. Driving this acceleration are concerns about energy security, economy, as well as climate change. The increased pace of renewable energy deployment will require investment to flow, particularly to emerging markets and developing economies. The IEA chief said that India can demonstrate that a developing country can manage its clean energy transition but will require financial and technological support of advanced countries to move faster. Total renewable energy capacity, according to the International Energy Agency, is set to almost double in the next five years, overtaking natural gas and coal as the largest source of electricity generation. Over the next five years (2022-27), global renewable power capacity is expected to grow by 2400 GW.

Rajya Sabha passes Energy Conservation (Amendment) Bill

The Rajya Sabha passed the Energy Conservation (Amendment) Bill on December 12, 2022, to mandate non-fossil sources of energy and establish a domestic carbon market in India. "The passage of Energy Conservation (Amendment) Bill, 2022 in Rajya Sabha today paves the way to enhanced use of renewable energy," RK Singh, Union minister of power and new & renewable energy, wrote on Twitter. He added that the country is relentlessly marching towards its target of reducing India's carbon intensity by 45 per cent by 2030. This goal is a part of India's updated Nationally Determined Contributions (NDC). According to Global Energy Monitor, the government will issue carbon credits to businesses or other institutions interested in the scheme. It added that industries could sell and buy credits to meet their carbon budget. Carbon credits will not be sold to other countries, Singh said. The amended bill aims to bring large residential buildings under the Energy Conservation regime, enhance the scope of the Energy Conservation Building Code, and amend penalty provisions. It also applies to commercial buildings with a connected load of 100 Kilowatt or contracts demand of 120 Kilo-volt Ampere and above.

The world will gain enough renewable energy in 5 years to power China, says IEA

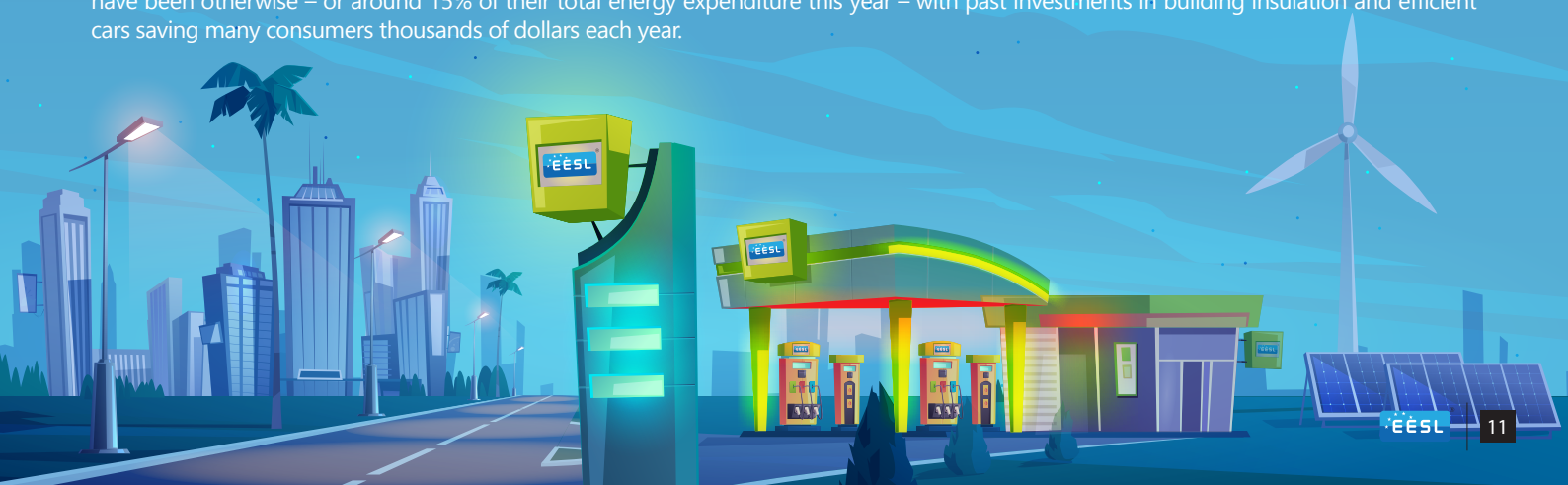
Global renewable power capacity is set to grow as much in the next five years as it has over the past two decades, as soaring energy prices and the climate crisis force governments to ditch fossil fuels. The report published by the International Energy Agency forecasts a sharp acceleration in installations of renewable power. It now expects green energy to overtake coal to become the largest global source of electricity by early 2025. Global renewable power capacity is now expected to grow by 2,400 gigawatts (GW) between 2022 and 2027, an amount equal to the entire power generating capacity of China today, according to the report. According to the IEA report, the war in Ukraine is a "decisive moment for renewables in Europe," where governments and businesses are scrambling to replace Russian gas with alternatives. The European Union now prohibits Russian crude oil imports by sea, setting up the bloc to have phased out 90% of oil imports from Russia by the end of the year. Policy and market reforms in China, the United States and India are also driving the growth in renewable power.

CleanMax and Meta partner to invest in 33.8 MW renewable energy projects in India

CleanMax Enviro Energy Solutions, a Commercial & Industrial (C&I) renewable energy company, announced it has partnered with Meta to invest in 33.8 Megawatt of renewable energy projects in India. Under the deal, CleanMax will own and operate the projects, while Meta will purchase 100 per cent of the environmental attributes from the projects for years to come. "The 33.8 MW of renewable energy project capacity is made up of 21.6 MW of wind and 12.2 MW of solar, which is in addition to 32 MW of wind energy jointly announced last year. This brings CleanMax and Meta's total investment to 65 MW of new renewable energy that will be added to India's electrical grid," the companies said in a statement. The projects are part of a larger wind-solar hybrid farm being developed by CleanMax. Once commissioned, the overall capacity of the CleanMax wind solar hybrid farm will stand at 364 MW; comprising 154 MW wind and 210 MWp solar.

Global energy efficiency progress is accelerating, signalling a potential turning point after years of slow improvement

Energy efficiency actions have accelerated globally in 2022 as governments and consumers have increasingly turned to efficiency measures as part of their responses to fuel supply disruptions and record-high energy prices, indicating a potential turning point after several years of slow progress. Global investments in energy efficiency – such as building renovations, public transport and electric car infrastructure – reached USD 560 billion in 2022, an increase of 16% on 2021, according to the IEA's latest market report, Energy Efficiency 2022. The IEA analysis found that, thanks to energy efficiency actions taken since 2000, total energy bills in IEA countries in 2022 are set to be USD 680 billion less than they would have been otherwise – or around 15% of their total energy expenditure this year – with past investments in building insulation and efficient cars saving many consumers thousands of dollars each year.



संभव है !

1. है संभव मैं अरत हूँ पर तुम हो तो आश्वस्त हूँ।
प्रत्यक्ष है सब दिख रहा, रुदन कर रही धरा ।
शत्रु अदृश्य व्याप्त हो अड़ा, पुनः स्वतबीज है खड़ा ॥
शक्ति विलुप्त है कहीं, पुकारती वसुंधरा ।
है यज्ञ ये सरल नहीं, चण्डी स्वस्वप धरो माँ वही ॥
ज्ञान का रूप ले, विज्ञान की खड़ग लिए ।
करो कृपा शक्ति त्वम, सुनो पुकार मातु ममः ॥
 2. संभव है मैं अरत हूँ पर तुम हो तो आश्वस्त हूँ।
सब करें यही जतन, सतर्क हो नित्य मनन ।
विश्वास कर धैर्य संग, ज्ञान- ध्यान और नियम ॥
विश्व के कल्याण को, नियम की डोर को धरे ।
प्राणियों में हो सद्भावना, यही मंत्र मूल सधे ॥
तुम्हीं से है आस अब, तुम्हीं से है ये प्रार्थना ।
कर्मवीर हो, हो विश्व तुम, अड़िग रहो धीर तुम ॥
 3. संभव है मैं अरत हूँ पर तुम हो तो आश्वस्त हूँ।
होगी सुबह है प्रेरणा, तुम्हीं से है चेतना ।
प्रत्यक्ष अब है दिख रहा, छटेगी कालरात्रि ये ।
तुम्हीं से शक्ति है प्रसन्न, मांग लो दिव्य वचन ।
हो कर्मक्षेत्र मे खड़े, है वीरवर, तुम्हें नमन ॥
- संभव है मैं अरत हूँ पर तुम हो तो आश्वस्त हूँ ॥
संभव है मैं अरत हूँ पर तुम हो तो आश्वस्त हूँ ॥

सुमित 'मलु' शर्मा!
सलाहकार (जनसम्पर्क)
ईईएसएल (EESL)

TO WATCH
VIDEO PLEASE
SCAN THE
QR CODE



MONTHLY HIGHLIGHTS



EESL India



@EESL_India · Dec 1



We hosted a workshop in [#Ranchi](#) along with [@beeindia](#) to promote EnergyEfficiency solutions in PAT industries. These innovative technologies will help in reducing energy consumption of industries as well as their overall [#carbonemissions](#). [@MinOfPower](#) [@OfficeOfRKSingh](#)



1



8



26



EESL India



@EESL_India · Dec 7



We've successfully installed over 5.70 Lakh [#LED](#) streetlights in the state of Bihar. This has significantly improved visibility & road safety for the citizens of Bihar. [@officembihar](#) [@IPRD_Bihar](#) [@MinOfPower](#) [@PMCBihar](#) [@CEO_EESL](#) [@AnandKishorIAS](#) [@Prabhat06May](#)



EESL India



@EESL_India · Dec 15



On the occasion of [#NationalEnergyConservationDay](#), we have signed an MoU with Energy Conservation Mission of The Institution of Engineers (India), [#Telangana](#), for propagation of energy conservation & [#energyefficiency](#) in the state [@MishraaAnimesh](#) [@Savitri38497958](#) [@ECMIETSC](#)



2



4



23



EESL India



@EESL_India · Dec 15



We are pleased to receive the Certificate of Recognition from Rajasthan Energy Conservation Award 2022 in the Govt. department category. Kudos to our on-ground teams for exhibiting excellency in their efforts to integrate [#EnergyEfficient](#) technologies across Rajasthan [@CEO_EESL](#)



5



18



EESL India



@EESL_India · Dec 15



As part of [#NationalEnergyConservationDay](#) celebrations in [#Odisha](#), our on-ground teams exhibited energy efficient appliances like [#UJALA](#) blubs, tube lights & BLDC fans to raise awareness about energy conservation practices [@EnergyOdisha](#) [@aeicpcei](#) [@MinOfPower](#) [@CEO_EESL](#)



1



3



26



EESL India



@EESL_India · Dec 16



As part of our [#NationalEnergyConservationWeek](#) celebrations, we hosted several activities in schools & institutes of Telangana aimed at raising awareness on benefits of [#energyefficiency](#) [@MinOfPower](#) [@OfficeOfRKSingh](#) [@CEO_EESL](#)



1



1



13

CHRISTMAS CELEBRATION AT EESL OFFICE





NATIONAL E-MOBILITY PROGRAMME

- With the vision of 30 percent e-mobility by 2030, National E-Mobility Programme was launched in India on March 7, 2018
- CESL, a wholly owned subsidiary company of EESL is offering various categories of EVs as per the need from Extended Range Sedans to Long Range SUVs, reducing the price of electric vehicles by 25 percent through bulk procurement
- E-vehicles leased out to government organisations at same terms & conditions as petrol/diesel cars
- Low cost of ownership; fuel savings of INR 80,000 to INR 1,00,000 per annum
- Low maintenance cost as less number of moving parts
- No tail pipe emissions
- Silent operations leading to less noise pollution
- Till date, 1,857 e-cars have been deployed across various states in India.

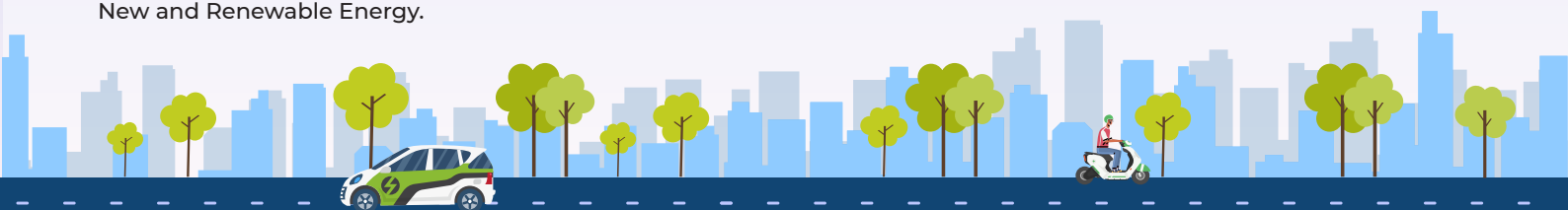
Contact Helpline Number: **1800 180 3580** or mail us on **helpline@eesl.co.in**

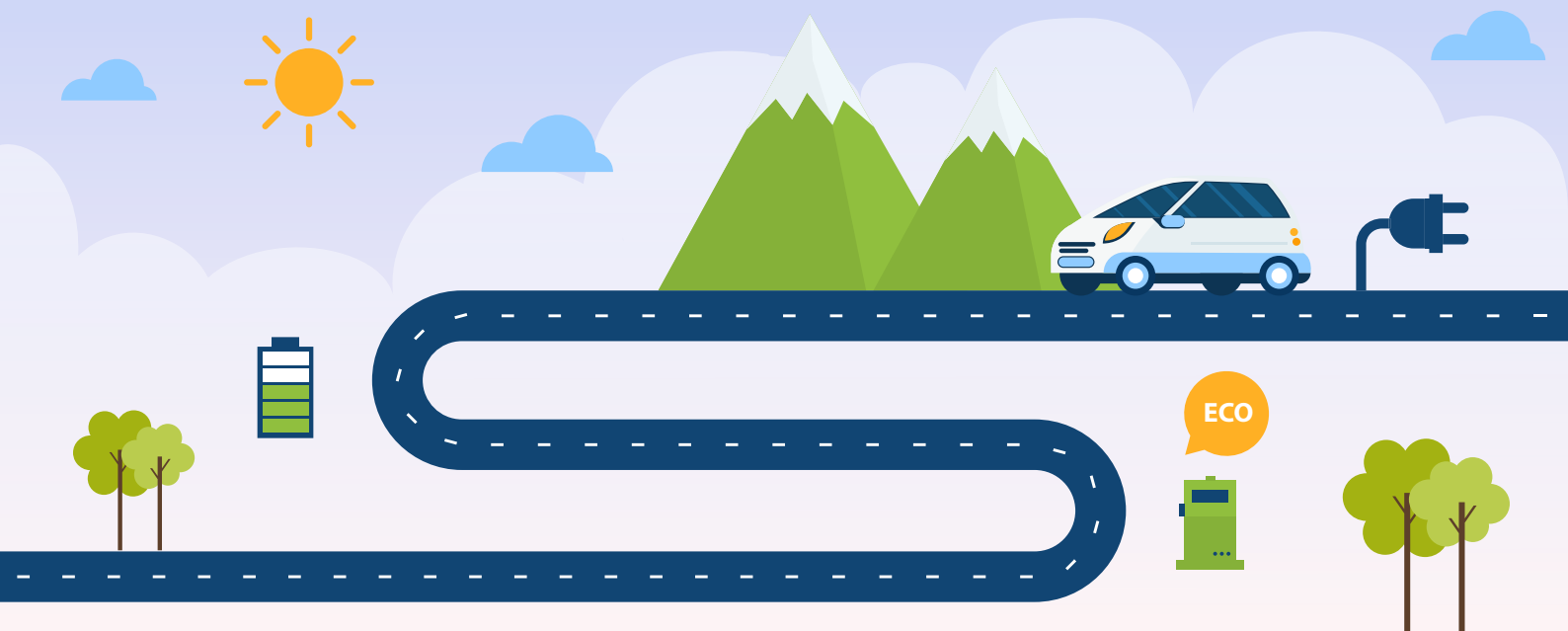
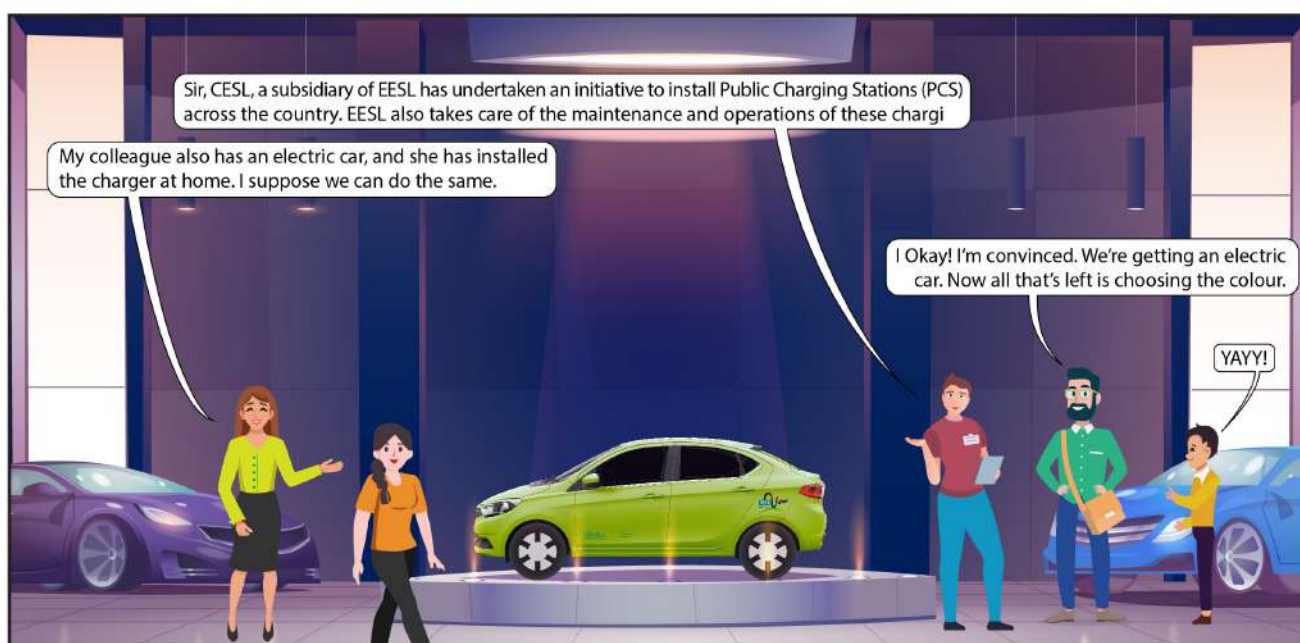
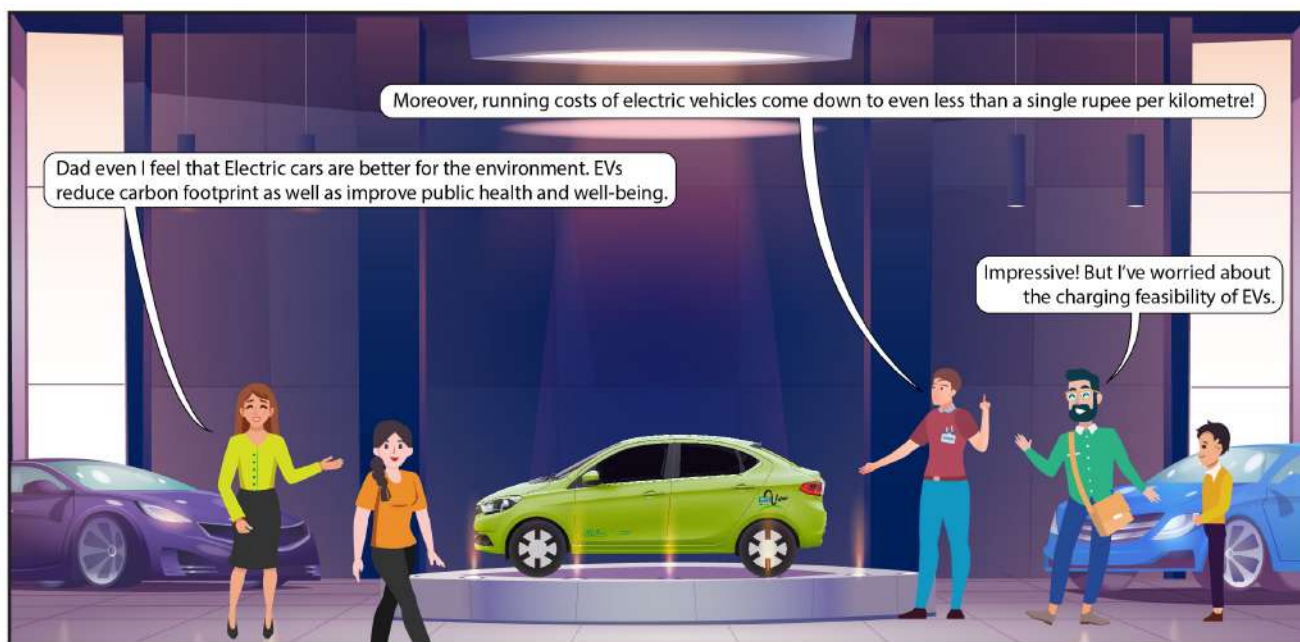
* Terms and Conditions apply. For more information visit **www.eeslindia.org**



NATIONAL E-MOBILITY PROGRAMME

Government of India (GoI) approved the National Mission on Electric Mobility. Hence considering huge market potential and aspiration of GoI to take leadership in enabling e- mobility in India, EESL has got directions from Ministry of Power to enter EV domain considering demand aggregation. Subsequently, National E-Mobility Programme was launched on 7th March 2018 by Hon'ble Minister of Power, New and Renewable Energy.





MERRY CHRISTMAS

& HAPPY NEW YEAR



For more information, please contact us:



Energy Efficiency Services Limited (EESL)

5th, 6th & 7th Floor, Core -III, Scope Complex,
7 - Lodhi Road, New Delhi - 110003

Phone: 011-45801260

Website: www.eeslindia.org

